



PATENT APPLICATION

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re the Application of

Toshifumi TAKAOKA et al.

Group Art Unit: 2834

Application No.: 09/694,021

Examiner: J. Waks

Filed: October 23, 2000

Docket No.: 106967

For: CONTROL APPARATUS FOR TRANSMISSION-EQUIPPED HYBRID VEHICLE,
AND CONTROL METHOD FOR THE SAME

REQUEST FOR RECONSIDERATION

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

In reply to the February 11, 2003 Office Action, reconsideration of the above identified application is respectfully requested.

Claims 1-6, 20 and 21 are pending in this application. At the outset, Applicants note that though the Office Action indicates that claims 1-6, 21 and 22 are pending, claim 22 has actually been canceled. Thus, Applicants assume that the Office Action intended to state that claims 1-6, 20 and 21 are pending.

The Office Action rejects claims 1-3, 20 and 21 under 35 U.S.C. §103(a) over JP 10-23608 to Tabata et al. (hereinafter Tabata) in view of JP 9-3714 ([sic], presumably this is JP 9-37411) to Taniguchi et al. (hereinafter Taniguchi). In addition, claims 4-6 are rejected under 35 U.S.C. §103(a) over the above references, and further in view of JP 6-48222 (Boll) and JP 11-4506 (Minesawa et al.). These rejections are respectfully traversed.

In particular, Applicants respectfully submit that the combination of applied references fails to suggest or disclose a control apparatus for a hybrid vehicle having an

engine and a motor as drive power sources comprising at least the feature of a controller that detects a drive power requested for the vehicle drive wheel and that adjusts the drive power by setting an engine output increase, a motor output increase and a gear speed change by increasing a gear ratio, in an order of descending priorities of (1) the engine output increase, (2) the motor output increase, and (3) increasing the gear ratio so as to achieve the drive power requested, as recited in claims 1 and 20.

Tabata teaches a controller for a hybrid vehicle which provides electric motor torque assist to the engine upon satisfaction of certain conditions. In Tabata, when acceleration exceeds a threshold value, torque assist is provided by the motor generator while increase assist from the fuel injection control is limited, in order to preserve fuel economy.

Specifically, in Tabata, when the increment ($\theta_{AC2} - \theta_{AC1}$) in the amount of accelerator operation is equal to or above a specified threshold value (α), motor assist control is exercised. Thus, in Tabata, when acceleration exceeds a certain value, motor output is actually dominant to engine output because the priorities change upon satisfaction of the acceleration condition. Thus, Tabata fails to teach adjusting drive power by setting an engine output increase, a motor output increase and gear speed change in descending priority.

The Office Action admits that Tabata is silent with respect to a gear ratio change. The Office Action relies upon Taniguchi to teach increasing a gear ratio to supply power. The Office Action further alleges that such a feature is well known in the art. However, Applicants respectfully submit that neither the art of record nor the state of the art suggest or disclose a controller which supplies power by causing an engine output increase, a motor output increase and gear ratio increase, in an order of descending priority. Taniguchi merely discloses that controlling a gear ratio of a continuous variable transmission can be used to adjust drive power. Taniguchi does not teach a controller which gives lower priority to a gear ratio increase than motor or engine output increases.

Therefore, Applicants respectfully submit that independent claims 1 and 20 are patentable over the combination of applied references. Dependent claims 2-6 and 21 are likewise patentable over the combination of applied references for at least the same reasons as claims 1 and 20. Accordingly, Applicants respectfully request that the rejections of claims 1-6, 20 and 21 under 35 U.S.C. §103(a) be withdrawn.

Applicants submit that this application is in condition for allowance. Favorable reconsideration and prompt allowance of claims 1-6, 20 and 21 are earnestly solicited. Should the Examiner believe that anything further would be desirable to place this application in even better condition for allowance, the Examiner is invited to contact Applicants' undersigned representative at the telephone number listed below.

Respectfully submitted,



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Date: May 12, 2003

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